THE OCCURRENCE OF *MESOCOELOPUS COLLARIS* MULSANT AND REY IN COLUMBUS, OHIO, WITH BIOLOGICAL NOTES (COLEOPTERA: ANOBIIDAE)

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On July 5, 1961, shortly after the appearance of my paper on *Mesocoelopus collaris* Mulsant and Rey in which the genus was newly recorded from the United States (White, 1961) I discovered four specimens of this species on window sills within the Botany and Zoology Building on the Ohio State University campus. This discovery is of interest because all previously recorded specimens are from the Atlantic coastal area, so that this record greatly expands the known range of this species. The original records were from Coatesville, Pa., Roanoke, Va., and Washington, D. C. Additional specimens have recently been seen from Newark, Delaware, collected November 2, 1950, by H. E. Milliron from lamp shades. These four individuals were in material loaned for study by W. A. Connell of the University of Delaware.

In my article recording *M. collaris* it was mentioned that some specimens bore labels stating that they were bred from English ivy. Examination of dead English ivy vines (*Hedera helix* Linnaeus) clinging to the Botany and Zoology Building disclosed numerous tiny holes dotting the surface of many of the stems. Removal of the bark showed damage which proved to be due to larval activity of *M. collaris*. This gave the author opportunity to make observations on the life history of this species.

Very little biological information is available for many species of Anobiidae, and though incomplete it seems advisable to present the following data on *M. collaris* Muls. & Rey.

The stems examined were collected on July 9, 1961, and varied from one to two feet in length. No evidence of larval activity was found in stems larger than 8 mm. in diameter. The smallest stem which contained burrows was 2 mm. in diameter. Close examination of seven once heavily infested stems disclosed one living, recently emerged adult (as evidenced by the general pale color and yellow, distended abdomen), three dead adults, two living larvae and over 30 dead larvae. With the exception of 4 or 5 dead larvae and one living larva, all of these were found in pupal chambers. The two living larvae and all but 1 or 2 dead larvae appeared mature. Between the elytra and abdomen of two dead adults there occurred circular, whitish objects knobed on one end which were found to be mites with greatly distended abdomens; one adult contained three of these, the other four. Numerous normal appearing, much smaller mites were observed on and within the beetles. Five of the dead larvae were partly covered with a dense, uniformly white fungus. An adult chalcid was found within the

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[2] My thanks to Richard Naskali for assistance with botanical portions of this paper.

hollow center of one of the stems; it was identified as a member of the family Pteromalidae and subfamily Pteromalinae. I was unable to carry the identification any farther.

The burrows lie mostly in the outer portion of the woody stem but nearly always extend partly into the bark tissue which is closely applied to the stem. The average maximum diameter of a burrow is about 1.2 mm. The tunneling typically runs the length of the stem but occasional short side branches and meanderings occur. Often the burrow will double on itself or cut transversely for some distance. Where many larvae occur close together the burrows are quite confused and irregular so that the excavations of one larva are indistinguishable from those of another. The burrows are filled with a fine, powdery frass. Microscopic examination shows whitish woody frass to be distinct from the rounded light brown fecal pellets. In one heavily infested stem (6 mm. in diameter) there occurred 5 pupal chambers within a one inch section.

The pupal chamber is elongate oval and is located deeper into the woody tissue than the regular larval burrows; it is level with the surface and most often parallel to the long axis of the stem. Some are at an angle to the length of the stem or even at right angles to it; these are often adjacent to a bud or an irregular part of the stem. A silk-like plug is constructed which seals the larval entrance off from the pupal chamber; bits of wood or fecal material cling to the outside of this. The silken material may also close off a wall of a chamber exposed by a burrow. In some of the smaller stems the pupal chamber is constructed in the central, hollow portion of the stem. When this occurs, both ends of the chamber as well as the larval entrance are sealed off with silken plugs. No cocoons were observed, although they have been recorded for other anobiids, notably *Eucrada humeralis* (Melsh.) by Rozen, 1957, *Hedobia granosa* Lec., by Rozen, 1957, *H. imperalis* (L.), by Xambeu, 1874, *H. regalis* (Duft.), by Portevin, 1896, and *H. pubescens* (Oliv.), by Wachtl, 1876.

The exit hole is nearly circular and the bore emerges at a right angle to the surface of the stem unless the pupal chamber is quite shallow. No larval or pupal exuviae were observed in the pupal chambers.

The central, hollow portion of the stem is frequently filled for some distance with rounded or oval, nearly white to often blackish, sometimes resinous looking bodies which are assumed to be fecal pellets. These are up to two times larger than the light brown fecal pellets found in the frass from larval burrows. One end of the tunnel is closed with a dense, nearly black plug quite different from that which is made by the larva in constructing the pupal chamber. This plug is presumably constructed of glued together fecal pellets. It is not known if the work and the fecal pellets are produced by the larva or the adult.

Böving (1954, pp. 135 to 136) described a larva collected from ivy which he designated as *Catorama* sp. The collection data of his two series are nearly identical with those given for two series of adult specimens on which the article recording *M. collaris* Muls. & Rey from the United States was partly based (White, 1961). The two larvae which were collected alive by myself agree fairly closely with Böving's description except that the number of dorsal asperities is consistently a few less than he records.

It was noted that the number of asperities differed between the two larvae examined, so this discrepancy with his description may be of no significance. All evidence considered, there can be little doubt that his description is of the larva of *Mesocoelopus collaris* Mulsant & Rey.

Literature Cited

Bøving, A. G.

1954. Mature larvae of the beetle-family Anobiidae. Det Kongelige Danske Videnskabernes Selskab (Biol.). 22(2): 1-298, 50 plates.

Portevin, G.

1896. Description de la larva de *Hedobia* (*Ptinomorphus*) *regalis* Duft. Bull. Soc. Ent. France, pp. 15-16.

Rozen, J. G.

1957. Biological notes on *Eucrada humeralis* (Melsheimer) (Anobiidae). Coleopt. Bull., 11: 53-54.

Wachtl, F.

1876. Beschreibung der Metamorphose und der Lebensweise von *Hedobia pubescens* Oliv. Verhand. zool.-bot. Ges. Wien., 26: 709-712, figs.

White, R. E.

1961. A genus of Anobiidae unrecorded from the United States. Ohio Journ. Sci., 61(3): 183-185, 1 fig.

Xambeu, V.

1894. Moeurs et métamorphoses des insectes. Ann. Soc. Ent. France., 63: 459-504.

NOTICE

Ross H. Arnett, Jr., when a graduate student at Cornell University, conceived the idea of a magazine devoted to the study of beetles. He published Vol. 1, No. 1, of the Coleopterists' Bulletin on April 1, 1947. At first the Bulletin was mimeographed, but soon it was printed in set type, all the work being done by hand by Arnett and his family. Finally it was printed by professional printers. It grew from a magazine for techniques, field notes, literature notices, and items of current interest to become an outlet for basic research articles, including revisions, new taxa, life history studies, etc. The Bulletin was made into a magazine at which Coleopterists could look with pride. It seems superfluous to say that all this came about because of Arnett, but it should be said and remembered. He conceived it, he made it, he nurtured it, and he developed it. Few people know how much he nurtured it, through thick and thin, with ideas, time, and materials. Even today he holds in his pocket a bill for several hundred dollars for the printing costs of volume 12. Now, after fifteen years as editor, he resigns so he may devote more time to his personal research. All Coleopterists owe Arnett a debt of gratitude for having made the Coleopterists' Bulletin. He has done a fine job.—T. J. Spilman

BEETLE TALK

The foreign grain beetle is *Ahasverus advena* (Waltl). Many people apparently refuse to believe that Waltl is actually an author's name. They put a period after the final "l" as if the name were an abbreviation, or they assume Waltl is a typographical error for Walk.(=Walker). There must be a practical plan that would establish Waltl as a legitimate name. Any suggestions? Please do not suggest an application to the International Commission on Zoological Nomenclature to change the spelling of the author's name.